Remarks/Arguments:

Claims 9, 11-21, 24 and 26 are pending in the above-referenced application. Of those, claims 21 and 24 have been withdrawn. Applicants acknowledge that claim 21 is withdrawn without traverse. Claims 9 and 12 have been amended. No new matter is presented herein.

Claim 12 stands rejected under 35 U.S.C. § 102(b) as anticipated by Debesis (U.S. Patent No. 4,940,308). Claims 9-11, 15, 18 and 19 stand rejected under 35 U.S.C. § 102(e) as anticipated by Komma et al. (U.S. Patent No. 5,815,293). Claims 9, 10, 13, 14 and 16-20 stand rejected under 35 U.S.C. § 102(e) as anticipated by Mukai et al. (U.S. Patent No. 5,995,286).

Komma discloses a compound objective lens made up of a hologram lens and an objective lens. The hologram lens transmits a part of the incident light, without any diffraction, to form a beam. It diffracts the remaining part of the incident light to form a beam of first-order diffracted light. The objective lens converges the transmitted light.

Mukai discloses an optical system having a diffractive optical element. The optical element has a diffractive optical surface that allows the optical element to act as a lens as a result of light rays being deflected by the diffractive optical surface.

Debesis discloses a laser beam stop. As shown in FIG. 3a, the stop includes a rectangular piece 40 of optical glass. A disc-shaped area 42 and a diffraction grating pattern 44 are formed on the optical glass 40. The diffraction grating pattern 44 includes an annular region 46, contiguous with a clear area 42, with a varying diffraction efficiency.

Applicants' invention, as recited by claim 9, includes a feature which is neither disclosed nor suggested by the art of record, namely:

> ...an aperture having a first opening and a second opening...
>
> ...said first opening and said second opening are mutually exclusive...
>
> ...an imaginary region is bi-symmetrical with said first opening about an axis passing through the center of the lens,
>
> said imaginary region is entirely within said second opening....

This means that two openings are formed in a lens, a first opening and a second opening. The first opening and the second opening do not overlap. If you were to fold the lens along an axis passing through the center of the lens, the first opening would fall on top of the imaginary region. The imaginary region is a region that is entirely within the second opening. This feature is found in the originally filed application at FIG. 11.

Komma discloses a hologram lens. As shown in Fig. 15A, Komma's hologram lens contains four similarly-sized diffraction regions 33A-D. The diffraction regions are located in an opening formed around the outer perimeter of the hologram lens. The hologram lens further includes an opening in the center of the lens 32A which includes a grating.

The Examiner argues that the central opening reads on Applicants' first opening and that either regions 33A-D or 33A and 33D read on Applicants' second opening. If regions 33A-D are read as Applicants' second opening, the first opening (32A) and second opening (33A-D) would not be mutually exclusive (i.e., non-overlapping). The same is true if regions 33A and 33D are read as Applicants' second opening. Further, if regions 33A and 33D are read as Applicants' second opening, if you were to fold the lens along an axis passing through the center of the lens, the first opening (32A) would not fall on top of an imaginary region contained entirely within the second opening (33A and 33D). Accordingly, Komma does not include all features of amended claim 9.

Mukai discloses a diffractive optical element. FIG. 9 shows sections of a molding surface of the diffractive optical element in regions corresponding to central and peripheral regions around an optical axis 5 of the diffractive optical surface of the lens. See col. 10, lines 11-14.

The Examiner argues that the peripheral region reads on Applicants first opening and that the central region reads on Applicants second opening. However, if you were to fold the lens along an axis passing through the center of the lens (e.g., through optical axis 5), no portion of peripheral region 3 (first opening) would fall on top of an imaginary region contained entirely within the central region (second opening). Accordingly, Mukai does not include all features of amended claim 9.

Debesis discloses a laser beam stop. As shown in FIG. 3a, for example, the stop includes a rectangular piece 40 of optical glass. A disc-shaped area 42 and a diffraction grating pattern 44 are formed on the optical glass 40. The diffraction grating pattern 44 includes an annular region 46, contiguous with a clear area 42, with a varying diffraction efficiency. See col. 3, lines 10-20. Even if the Examiner were to argue that disc-shaped area 42 and diffraction grating pattern 44 are first and second openings, respectively, the first and second openings would overlap. Accordingly, Debesis does not disclose all features of amended claim 9.

While not identical to claim 9, claim 12 includes features similar to claim 9. Accordingly, claim 12 is patentable over the art of record for the reasons set forth above.

Claims 11, 13-20 and 26 include all the features of claim 9 from which they depend. Thus, claims 11, 13-20 and 26 are also patentable over the art of record for the reasons set forth above.

In view of the amendments and arguments set forth above, the above-identified application is in condition for allowance which action is respectfully requested.

Respectfully submitted,

Lawrence E. Ashery, Reg. No. 34,515
Attorney for Applicants

LEA/AR/dmw

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P.O. Box 980
Valley Forge, PA 19482
(610) 407-0700

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